Wentong Cai

List of Publications by Year
in descending order

357
papers

3,832
citations

201674

27
h-index

254184

43
g-index

368
all docs

368
docs citations

368
times ranked

2619
citing authors

#	Article	IF	Citations
1	Transparent adaptation of single-user applications for multi-user real-time collaboration. ACM Transactions on Computer-Human Interaction, 2006, 13, 531-582.	5.7	153
2	Crowd modeling and simulation technologies. ACM Transactions on Modeling and Computer Simulation, 2010, 20, 1-35.	0.8	132
3	Agent–based human behavior modeling for crowd simulation. Computer Animation and Virtual Worlds, 2008, 19, 271-281.	1.2	94
4	Self-Learning Gene Expression Programming. IEEE Transactions on Evolutionary Computation, 2016, 20, 65-80.	10.0	91
5	Multifactorial Genetic Programming for Symbolic Regression Problems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 4492-4505.	9.3	88
6	Time-space consistency in large-scale distributed virtual environments. ACM Transactions on Modeling and Computer Simulation, 2004, 14, 31-47.	0.8	87
7	Host legume–exuded antimetabolites optimize the symbiotic rhizosphere. Molecular Microbiology, 2009, 73, 507-517.	2.5	75
8	A Novel Two-Component Signaling System Facilitates Uropathogenic Escherichia coli's Ability to Exploit Abundant Host Metabolites. PLoS Pathogens, 2013, 9, e1003428.	4.7	71
9	Dynamic Bin Packing for On-Demand Cloud Resource Allocation. IEEE Transactions on Parallel and Distributed Systems, 2016, 27, 157-170.	5.6	66
10	A graph-based model to measure structural redundancy for supply chain resilience. International Journal of Production Research, 2019, 57, 6385-6404.	7.5	64
11	On dynamic bin packing for resource allocation in the cloud. , 2014, , .		63
12	Large scale agent-based simulation on the grid. Future Generation Computer Systems, 2008, 24, 658-671.	7.5	55
13	A Cost Calculus for Parallel Functional Programming. Journal of Parallel and Distributed Computing, 1995, 28, 65-83.	4.1	53
14	FNR Regulates Expression of Important Virulence Factors Contributing to Pathogenicity of Uropathogenic Escherichia coli. Infection and Immunity, 2014, 82, 5086-5098.	2.2	51
15	Structural-aware simulation analysis of supply chain resilience. International Journal of Production Research, 2020, 58, 5175-5195.	7.5	50
16	A load management system for running HLA-based distributed simulations over the grid. , 0, , .		49
17	Transcriptome Analysis of Avian Pathogenic Escherichia coli O1 in Chicken Serum Reveals Adaptive Responses to Systemic Infection. Infection and Immunity, 2011, 79, 1951-1960.	2.2	47
18	Hybrid modelling of crowd simulation. Procedia Computer Science, 2010, 1, 57-65.	2.0	46

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19	The Server Allocation Problem for Session-Based Multiplayer Cloud Gaming. IEEE Transactions on Multimedia, 2018, 20, 1233-1245.	7.2	44
20	Symbiotic Simulation Systems: An Extended Definition Motivated by Symbiosis in Biology. , 2008, , .		42
21	Play Request Dispatching for Efficient Virtual Machine Usage in Cloud Gaming. IEEE Transactions on Circuits and Systems for Video Technology, 2015, 25, 2052-2063.	8.3	38
22	On First Fit Bin Packing for Online Cloud Server Allocation. , 2016, , .		38
23	How network topology affects dynamic loading balancing. IEEE Parallel and Distributed Technology, 1996, 4, 25-35.	0.6	37
24	A Service Oriented HLA RTI on the Grid. , 2007, , .		36
25	SEMSim Cloud Service: Large-scale urban systems simulation in the cloud. Simulation Modelling Practice and Theory, 2015, 58, 157-171.	3.8	36
26	A decoupled federate architecture for high level architecture-based distributed simulation. Journal of Parallel and Distributed Computing, 2008, 68, 1487-1503.	4.1	35
27	Density-based evolutionary framework for crowd model calibration. Journal of Computational Science, 2015, 6, 11-22.	2.9	35
28	A Survey on Agent-based Simulation Using Hardware Accelerators. ACM Computing Surveys, 2019, 51, 1-35.	23.0	32
29	Efficient parallel algorithms for tree accumulations. Science of Computer Programming, 1994, 23, 1-18.	1.9	31
30	Automatic model construction for the behavior of human crowds. Applied Soft Computing Journal, 2017, 56, 368-378.	7.2	29
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34	Leveraging Machine Learning Techniques and Engineering of Multi-Nature Features for National Daily Regional Ambulance Demand Prediction. International Journal of Environmental Research and Public Health, 2020, 17, 4179.	2.6	28
35	Distributed edge partitioning for trillion-edge graphs. Proceedings of the VLDB Endowment, 2019, 12, 2379-2392.	3.8	26
36	Differential evolution with sensitivity analysis and the Powell's method for crowd model calibration. Journal of Computational Science, 2015, 9, 26-32.	2.9	25

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37	Learning behavior patterns from video for agent-based crowd modeling and simulation. Autonomous Agents and Multi-Agent Systems, 2016, 30, 990-1019.	2.1	25
38	Algorithms for HLA-based distributed simulation cloning. ACM Transactions on Modeling and Computer Simulation, 2005, 15, 316-345.	0.8	24
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40	Synchronization in federation community networks. Journal of Parallel and Distributed Computing, 2010, 70, 144-159.	4.1	24
41	Federate Migration in a Service Oriented HLA RTI. , 2007, , .		23
42	Incremental route inference from low-sampling GPS data: An opportunistic approach to online map matching. Information Sciences, 2020, 512, 1407-1423.	6.9	23
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44	Traffic State Estimation Using Floating Car Data. Procedia Computer Science, 2016, 80, 2008-2018.	2.0	22
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49	Distributed supply chain simulation across enterprise boundaries. , 0, , .		19
50	Research issues in symbiotic simulation. , 2009, , .		19
51	A Computational Model of Emotions for Agent-Based Crowds in Serious Games. , 2011, , .		19
52	Simulation-based optimization of StarCraft tactical AI through evolutionary computation. , 2012, , .		19
53	Proteome response of an extraintestinal pathogenic Escherichia coli strain with zoonotic potential to human and chicken sera. Journal of Proteomics, 2012, 75, 4853-4862.	2.4	19
54	QoS-Aware Revenue-Cost Optimization for Latency-Sensitive Services in IaaS Clouds. , 2012, , .		19

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56	Transcriptional Control of Dual Transporters Involved in α-Ketoglutarate Utilization Reveals Their Distinct Roles in Uropathogenic Escherichia coli. Frontiers in Microbiology, 2017, 8, 275.	3.5	19
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63	An alternative time management mechanism for distributed simulations. ACM Transactions on Modeling and Computer Simulation, 2005, 15, 109-137.	0.8	16
64	Dag consistent parallel simulation. ACM SIGSIM Simulation Digest, 1997, 27, 178-181.	0.1	15
65	A secure information service for monitoring large scale grids. Parallel Computing, 2007, 33, 572-591.	2.1	15
66	CLUST: Simulating Realistic Crowd Behaviour by Mining Pattern from Crowd Videos. Computer Graphics Forum, 2018, 37, 184-201.	3.0	15
67	Time-minimal tiling when rise is larger than zero. Parallel Computing, 2002, 28, 915-939.	2.1	14
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69	A Rule-Based Motion Planning for Crowd Simulation. , 2009, , .		14
70	Autonomous Bee Colony Optimization for multi-objective function. , 2010, , .		14
71	A dynamic sort-based DDM matching algorithm for HLA applications. ACM Transactions on Modeling and Computer Simulation, 2011, 21, 1-17.	0.8	14
72	A review of interactive narrative systems and technologies: a training perspective. Simulation, 2015, 91, 126-147.	1.8	14

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86	Exploring Execution Schemes for Agent-Based Traffic Simulation on Heterogeneous Hardware. , 2018, , .		12
87	A previously uncharacterized two-component signaling system in uropathogenic Escherichia coli coordinates protection against host-derived oxidative stress with activation of hemolysin-mediated host cell pyroptosis. PLoS Pathogens, 2021, 17, e1010005.	4.7	12
88	Federate Migration in HLA-Based Simulation. Lecture Notes in Computer Science, 2004, , 856-864.	1.3	12
89	An Approach to the Run-Time Monitoring of Parallel Programs. Computer Journal, 1994, 37, 333-345.	2.4	11
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93	CALCULATING RECURRENCES USING THE BIRD-MEERTENS FORMALISM. Parallel Processing Letters, 1995, 05, 179-190.	0.6	10
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103	An empirical comparison of runtime systems for conservative parallel simulation. Lecture Notes in Computer Science, 1998, , 123-134.	1.3	9
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112	A Role-Dependent Data-Driven Approach for High-Density Crowd Behavior Modeling. ACM Transactions on Modeling and Computer Simulation, 2018, 28, 1-25.	0.8	9
113	Data-driven Crowd Modeling Techniques: A Survey. ACM Transactions on Modeling and Computer Simulation, 2022, 32, 1-33.	0.8	9
114	Performance analysis of packet bundling techniques in DIS. , 0, , .		8
115	Resource co-allocation for parallel tasks in computational grids. , 2003, , .		8
116	A framework for executing parallel simulation using RTI. , 0, , .		8
117	An Integrated And Adaptive Decision-Support Framework For High-Tech Manufacturing And Service Networks. , 0, , .		8
118	DynaSched: a dynamic Web service scheduling and deployment framework for data-intensive Grid workflows. Procedia Computer Science, 2010, 1, 593-602.	2.0	8
119	Efficient Neighbor Searching for Agent-Based Simulation on GPU. , 2014, , .		8
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130	Graphical Views of the Behavior of Parallel Programs. Journal of Parallel and Distributed Computing, 1993, 18, 223-230.	4.1	7
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132	Key Message Approach to Optimize Communication of Parallel Applications on Clusters. Cluster Computing, 2003, 6, 253-265.	5.0	7
133	A utility model for timely state update in distributed wargame simulations. Parallel and Distributed Simulation (PADS), Proceedings of the Workshop on, 2004, , .	0.0	7
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135	Workload management of cooperatively federated computing clusters. Journal of Supercomputing, 2006, 36, 309-322.	3.6	7
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137	A Hybrid HLA Time Management Algorithm Based on Both Conditional and Unconditional Information. Simulation, 2009, 85, 559-573.	1.8	7
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143	A fast parallel genetic programming framework with adaptively weighted primitives for symbolic regression. Soft Computing, 2020, 24, 7523-7539.	3.6	7
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147	Architecture Model for Information Service in Large Scale Grid Environments. , 2006, , .		6
148	Symbiotic Simulation Model Validation for Radiation Detection Applications. , 2009, , .		6
149	A replication structure for efficient and fault-tolerant parallel and distributed simulations. , 2010, , .		6
150	Automated modeling and analysis of agent-based simulations using the CASE framework. , 2010, , .		6
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152	Evolving Optimal and Diversified Military Operational Plans for Computational Red Teaming. IEEE Systems Journal, 2012, 6, 499-509.	4.6	6
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163	Runtime Abstraction-Level Conversion of Discrete-Event Wafer-fabrication Models for Simulation Acceleration. , 2020, , .		6
164	A framework for visual parallel programming. , 0, , .		5
165	A methodology for automating the parallelization of manufacturing simulations. , 0, , .		5
166	Dynamic load-balancing using prediction in a parallel object-oriented system. , 0, , .		5
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168	Evaluating alternative solutions for cloning in distributed simulation. , 0, , .		5
169	Synchronization and management of shared state in HLA-based distributed simulation. , 0, , .		5
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175	Dynamic partner identification in mobile agent-based distributed job workflow execution. Journal of Parallel and Distributed Computing, 2007, 67, 1137-1154.	4.1	5
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214	Why They Escape: Mining Prioritized Fuzzy Decision Rule in Crowd Evacuation. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 19456-19470.	8.0	4
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